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MARANDI, JAMES R	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/072,114	KIKINIS ET AL.	
	Examiner	Art Unit	
	JAMES MARANDI	2421	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 March 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,17,31,52-64,67,70 and 73-78* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,17,31,52-64,67,70 and 73-78* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is in response to applicant's amendment filed on 3/21/2011. Claims 1, 17, 31, 52-64, 67, 70, and 73-78 are presently pending. Claims 2-16, 18-30, 32- 51, 65, 66, 68, 69, 71 and 72 have been cancelled. Claims 73- 78 are newly presented.

1.1. Applicant's amended claims 31 and 64 fail to overcome the rejection under 35 U.S.C § 101, as the memory is still a computer readable media and still include transitory media. With respect to claim 31, applicant recites "memory storing computer-executable instructions". Said memory covers forms of non-transitory tangible media and transitory propagating signals. Furthermore, the specification does not preclude memory as being "transitory propagating signals".

The United States Patent and Trademark Office (USPTO) is obliged to give claims their broadest reasonable interpretation consistent with the specification during proceedings before the USPTO. *See In re Zeltz*, 893 F.2d 319 (Fed. Cir. 1989). The broadest reasonable interpretation of a claim drawn to computer readable medium typically covers forms of non-transitory tangible media and transitory propagating signals per se in view of the ordinary and customary

meaning of computer readable media, particularly when the specification is silent. *See* MPEP 2111.01.

A claim drawn to such a computer readable medium that covers both transitory and non-transitory embodiments may be amended to narrow the claim to cover only statutory embodiment to avoid a rejection under 35 U.S.C. § 101 by adding the limitation "non-transitory" to the claim. *Cf. Animals- Patentability, 1077 Off. Gaz. Pat. Office* 24 (April 21, 1987). Such an amendment would typically not raise the issue of new matter, even when the specification is silent because the broadest reasonable interpretation relies on the ordinary and customary meaning that includes signals *per se*. See Director Kappos' January 26th, 2010 memo.

Response to Arguments

2. Applicant's arguments filed on 3/21//2011 have been fully considered but they are moot in view of new ground(s) or rejection.

Use of a new ground of rejection is necessitated by newly amended recitations. Examiner points out that both Florin and Freach teach providing a menu of applications set on a polyhedron for ease of use and selection by the viewer. The system of Florin and Freach does not explicitly teach binding/ mapping a reduced

resolution image on a surface of a polyhedron. For this teaching Hashimoto, USPN 6,094,237 has been introduced. Furthermore, Oosterhout, USPN 6,405,371 which is of the record has been used.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3.1. Claims 31 and 64 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

With respect to claim 31, applicant recites "memory storing computer-executable instructions". Said memory covers forms of non-transitory tangible media and transitory propagating signals. Furthermore, the specification does not preclude memory as being "transitory propagating signals".

The United States Patent and Trademark Office (USPTO) is obliged to give claims their broadest reasonable interpretation consistent with the specification during proceedings before the USPTO. *See In re Zeltz*, 893 F.2d 319 (Fed. Cir. 1989). The broadest reasonable interpretation of a claim drawn to computer

readable medium typically covers forms of non-transitory tangible media and transitory propagating signals per se in view of the ordinary and customary meaning of computer readable media, particularly when the specification is silent. *See* MPEP 2111.01.

A claim drawn to such a computer readable medium that covers both transitory and non-transitory embodiments may be amended to narrow the claim to cover only statutory embodiment to avoid a rejection under 35 U.S.C. § 101 by adding the limitation "non-transitory" to the claim. *Cf. Animals- Patentability, 1077 Off. Gaz. Pat. Office* 24 (April 21, 1987). Such an amendment would typically not raise the issue of new matter, even when the specification is silent because the broadest reasonable interpretation relies on the ordinary and customary meaning that includes signals *per se*. See Director Kappos' January 26th, 2010 memo.

3.1.1. Claim 64 depends on Claim 31 are rejected by the same analysis.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 17, 31, 53, 55-64, 73, 74, 77, and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oosterhout et al., USPN 6,405,371 (hereinafter "Oosterhout") in view of Hashimoto, USPN 6,094,237 (hereinafter "Hashimoto").

5.1. Regarding claim 1, Oosterhout discloses **a method comprising:**

providing a plurality of individual image areas in an electronic programming guide (EPG) display (as displayed in Figs. 2, and 4; the processes of receiving an EPG program and its display is shown in Fig. 3; Col. 2, line 46 through Col. 3, lines 65; Also see Fig. 7)**;**

receiving a plurality of reduced resolution video streams corresponding to video programming channels (as part of receiving the sub images of the mosaic of Figs 2, 4, and 7, the sub images are represented with different refresh rates –reduced resolution- as disclosed in Col. 1, lines 64- 67)**;**

detecting a first reduced resolution video stream corresponding to a first selected video programming channel (upon selection of channel, 302, the corresponding stream is detected);

upon detection/ selection of the channels, the corresponding reduced resolution streams are represented in a two dimensional space as shown in Fig. 7. Therefore, Oosterhout discloses a two dimensional EPG with representation of various programs as snapshots/ reduced images.

Oosterhout's EPG display is silent on:

displaying a graphical representation of a polyhedron in a first of the individual image areas;

binding the first reduced resolution video stream to a surface of the graphical representation of the polyhedron; and

displaying the first reduced resolution video stream on the surface of the graphical representation of the polyhedron in the first of the individual image areas.

However, Hashimoto discloses a channel selecting system, where channels are detected (Fig. 1), and reduced resolution version of said channels is displayed as follows:

displaying a graphical representation of a polyhedron in a first of the individual image areas (Fig. 5; Col. 6, lines 8- 57; in particular lines 50-53);

binding the first reduced resolution video stream to a surface of the graphical representation of the polyhedron (Col. 6, lines 44-50)**; and**

displaying the first reduced resolution video stream on the surface of the graphical representation of the polyhedron in the first of the individual image areas (Col. 6, lines 8- 57)**.**

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Oosterhout with Hashimoto's invention in order to enable the viewer to conveniently follow/monitor/navigate through multiple programs at the same time (as taught by Oosterhout Col. 1, lines 31-35, and Hashimoto Col.1, lines 5-9, and lines 42- 48).

5.1.1. Regarding claim 53, the system of Oosterhout and Hashimoto discloses **displaying the graphical representation of the polyhedron** (Hashimoto: Figs. 5, 6,7, and 9) **comprises rendering a plurality of reduced resolution thumbnail video streams on different sides of the polyhedron** (as analyzed for claim 1, rendering Oosterhout's EPG channels on Hashimoto's polyhedron)**, wherein each of the plurality of reduced resolution thumbnail video streams corresponds to a different channel** (as disclosed by Oosterhout)**, and wherein the different sides of the polyhedron are rendered on different portions of the electronic**

programming guide (EPG) display, the different portions being simultaneously visible and having different sizes and shapes in the electronic programming guide (EPG) display (as disclosed by Hashimoto, e.g. Figs. 5 and 9, different sides of the polyhedron show different channels/ function of the EPG. Combination of Oosterhout and Hashimoto provides for snapshots of various EPG programs to be presented on different sides of said polyhedron and launched upon user selection.

5.1.2. Regarding claim 56, the system of Oosterhout and Hashimoto discloses **wherein each side of the polyhedron corresponds to a different video channel having a different reduced resolution video stream** (as disclosed by Oosterhout, each mosaic cell represents a programming stream within the EPG menu , e.g. Fig. 2, selectable by the user to launch said channel. Hashimoto teaches creating a polyhedron, each side representative of a function/ program, e.g. Fig. 5) **, the method further comprising:**

receiving a user command to rotate the graphical representation of the polyhedron (Hashimoto: Figs. 2, and 8; Col. 6, line 58- 67, and Col. 8, lines 36-64)**; and**

updating the EPG display by rotating the graphical representation of the polyhedron so that one of the different selected

channels is displayed in the first of the individual image areas (rotating the polyhedron to provide the viewer the face presenting the selected program/show of the channel as described above)**.**

5.1.2.1. Regarding claim 57, the system of Oosterhout and Hashimoto discloses **wherein each of the different video channels corresponding to the different sides of the polyhedron is a video channel selected by a user for displaying on the polyhedron** (as analyzed for claim 56)**, and wherein the video channels selected for displaying on the polyhedron are a subset of a larger number of video channels available to the user via the electronic programming guide** (Oosterhout's two dimensional menu enables the user to select a subset of available channels/ programs in a custom presentation as shown in Fig. 9. Hashimoto further teaches that the menu is configured in a polyhedron, improving on the two dimensional menu capability of Oosterhout).

5.1.2.2. Regarding claim 58, the system of Oosterhout and Hashimoto discloses **wherein each of the different video channels corresponding to the different sides of the polyhedron is a preselected video channel selected by a head-end administrator of**

the electronic programming guide (in the absence of any customization by the user, the composure and complexion of the EPG is at the discretion of the head-end, e.g. Fig. 5 of Oosterhout, where the user is allowed to make further customizations).

5.1.3. Regarding claim 62, the system of Oosterhout and Hashimoto discloses:

receiving a user command to perform at least one of moving the graphical representation of the polyhedron and resizing the graphical representation of the polyhedron (Hashimoto: Figs. 2, and 8; Col. 6, line 58- 67, and Col. 8, lines 36-64)**; and**

updating the EPG display in response to the user command (as disclosed by Hashimoto Fig. 8 to show the newly configured polyhedron)**, the updating comprising at least one of:**

moving the graphical representation of the polyhedron to a different one of the individual image areas (as discussed in the above example) **in the display of the electronic programming guide, and**

changing the size of the graphical representation of the polyhedron within the display of the electronic programming guide (Fig. 8; Col. 8, lines 36-64).

5.1.4. Regarding claim 73, the system of Oosterhout and Hashimoto discloses **wherein binding the first reduced video stream to the surface of the graphical representation of the polyhedron** (as analyzed in claim 1) **comprises using a 3D graphics pipeline** (Fig. 4, Col. 7, lines 36- 63).

5.1.5. Regarding claim 77, the system of Oosterhout and Hashimoto discloses **wherein detecting the first reduced resolution video stream corresponding to the first selected video programming channel** (as analyzed for claim 1) **comprises:**

Identifying a channel selected by a user (channels as selected by the viewer, Fig. 3, 301, 302)**;**

and decoding the first reduced resolution video stream corresponding to the selected channel (as highlighted in Figs. 5 and 6, Col. 4, lines 15-36).

5.2. Regarding claim 17, Oosterhout discloses **an apparatus comprising:**

a tuner (Fig. 1, 22) **configured to tune to a selected channel to receive a video stream** (22, Col. 2, lines 58-67); **and an electronic programming guide** (e.g. Figs. 2 and 7) **component configured to**:

display an electronic programming guide (EPG) comprising a plurality of individual image areas (as displayed in Figs. 2, and 4; the processes of receiving an EPG program and its display is shown in Fig. 3; Col. 2, line 46 through Col. 3, lines 65; Also see Fig. 7)**;**

receive a plurality of reduced resolution video streams corresponding to video programming channels (as part of receiving the sub images of the mosaic of Figs 2, 4, and 7, the sub images are represented with different refresh rates –reduced resolution- as disclosed in Col. 1, lines 64- 67)**;**

detect a first reduced resolution video stream corresponding to a first selected video programming channel (upon selection of channel, 302, the corresponding stream is detected)**;**

upon detection/ selection of the channels, the corresponding reduced resolution streams are represented in a two dimensional space as shown in Fig. 7. Therefore, Oosterhout discloses a two dimensional EPG with representation of various programs as snapshots/ reduced images.

Oosterhout's EPG is silent on:

display a graphical representation of a polyhedron in a first of the individual image areas;

bind the first reduced resolution video stream to a surface of the graphical representation of the polyhedron; and

display the first reduced resolution video stream on the surface of the graphical representation of the polyhedron in the first of the individual image areas.

However, Hashimoto discloses a channel selecting system, where channels are detected (Fig. 1), and reduced resolution version of said channels is displayed as follows:

display a graphical representation of a polyhedron in a first of the individual image areas (Fig. 5; Col. 6, lines 8- 57; in particular lines 50-53)**;**

bind the first reduced resolution video stream to a surface of the graphical representation of the polyhedron (Col. 6, lines 44-50)**; and**

display the first reduced resolution video stream on the surface of the graphical representation of the polyhedron in the first of the individual image areas (Col. 6, lines 8- 57)**.**

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Oosterhout with Hashimoto's invention in order to enable the viewer to conveniently follow/monitor/navigate through multiple programs at the same time (as taught by Oosterhout Col. 1, lines 31-35, and Hashimoto Col.1, lines 5-9, and lines 42- 48).

5.2.1. Regarding claim 55, the system of Oosterhout and Hashimoto discloses **displaying the graphical representation of the polyhedron** (Hashimoto: Figs. 5, 6,7, and 9) **comprises rendering a plurality of reduced resolution thumbnail video streams on different sides of the polyhedron** (as analyzed for claim 1, rendering Oosterhout's EPG channels on Hashimoto's polyhedron), **wherein each of the plurality of reduced resolution thumbnail video streams corresponds to a different channel** (as disclosed by Oosterhout)**, and wherein the different sides of the polyhedron are rendered on different portions of the electronic programming guide (EPG) display, the different portions being simultaneously visible and having different sizes and shapes in the electronic programming guide (EPG) display (**as disclosed by Hashimoto, e.g. Figs. 5 and 9, different sides of the polyhedron show different channels/ function of the EPG. Combination of Oosterhout and Hashimoto provides for snapshots of various EPG programs to be presented on different sides of said polyhedron and launched upon user selection.

5.2.2. Regarding claim 59, the system of Oosterhout and Hashimoto discloses **wherein each side of the polyhedron corresponds to a different video channel having a different reduced resolution video stream** (as disclosed by Oosterhout, each mosaic cell represents a programming

stream within the EPG menu , e.g. Fig. 2, selectable by the user to launch said channel. Hashimoto teaches creating a polyhedron, each side representative of a function/ program, e.g. Fig. 5) **, the method further comprising:**

receiving a user command to rotate the graphical representation of the polyhedron (Hashimoto: Figs. 2, and 8; Col. 6, line 58- 67, and Col. 8, lines 36-64)**; and**

updating the EPG display by rotating the graphical representation of the polyhedron so that one of the different selected channels is displayed in the first of the individual image areas (rotating the polyhedron to provide the viewer the face presenting the selected program/show of the channel as described above)**.**

5.2.2.1. Regarding claim 60, the system of Oosterhout and Hashimoto discloses **wherein each of the different video channels corresponding to the different sides of the polyhedron is a video channel selected by a user for displaying on the polyhedron** (as analyzed for claim 56)**, and wherein the video channels selected for displaying on the polyhedron are a subset of a larger number of video channels available to the user via the electronic programming guide** (Oosterhout's two dimensional menu enables the user to select a subset of available channels/ programs in a custom

presentation as shown in Fig. 9. Hashimoto further teaches that the menu is configured in a polyhedron, improving on the two dimensional menu capability of Oosterhout).

5.2.2.2. Regarding claim 61, the system of Oosterhout and Hashimoto discloses **wherein each of the different video channels corresponding to the different sides of the polyhedron is a preselected video channel selected by a head-end administrator of the electronic programming guide** (in the absence of any customization by the user, the composure and complexion of the EPG is at the discretion of the head-end, e.g. Fig. 5 of Oosterhout, where the user is allowed to make further customizations).

5.2.3. Regarding claim 63, the system of Oosterhout and Hashimoto discloses: **a receiver configured to receive a user command** (Fig. 1, manipulator 5, as detailed in Fig. 2, commanding the receiving module, such as 9) **to perform at least one of moving the graphical representation of the polyhedron and resizing the graphical representation of the polyhedron** (Hashimoto: Figs. 2, and 8; Col. 6, line 58- 67, and Col. 8, lines 36-64),

wherein the electronic program guide (EPG) component is further configured to update the EPG display in response to the user command (as disclosed by Hashimoto Fig. 8 to show the newly configured polyhedron)**, the updating comprising at least one of:**

moving the graphical representation of the polyhedron to a different one of the individual image areas (as discussed in the above example) **in the display of the electronic programming guide, and**

changing the size of the graphical representation of the polyhedron within the display of the electronic programming guide (Fig. 8; Col. 8, lines 36-64).

5.2.4. Regarding claim 74, the system of Oosterhout and Hashimoto discloses **a 3D graphics pipeline** (Fig. 4, Col. 7, lines 36- 63), **wherein the 3D graphics pipeline is configured to** (Fig. 4, Col. 7, lines 36- 63) **perform the binding of the first reduced video stream to the surface of the graphical representation of the polyhedron** (as analyzed in claim 1).

5.2.5. Regarding claim 78, the system of Oosterhout and Hashimoto discloses **wherein detecting the first reduced resolution video stream corresponding to the first selected video programming channel** (as analyzed for claim 17) **comprises:**

Identifying a channel selected by a user (channels as selected by the viewer, Fig. 3, 301, 302)**;**

and decoding the first reduced resolution video stream corresponding to the selected channel (as highlighted in Figs. 5 and 6, Col. 4, lines 15-36).

5.3. Regarding claim 31, Oosterhout discloses **at least one memory storing computer-executable instructions, that when executed on a computer, cause the computer to perform** (as shown in Fig. 1, various components, such as microprocessor 25, demod/ demux 21, and decoder 22 comprise program codes stored within memory structures performing the functions/ methods disclosed by Oosterhout) **a method comprising:**

providing a plurality of individual image areas in an electronic programming guide (EPG) display (as displayed in Figs. 2, and 4; the processes of receiving an EPG program and its display is shown in Fig. 3; Col. 2, line 46 through Col. 3, lines 65; Also see Fig. 7)**;**

receiving a plurality of reduced resolution video streams corresponding to video programming channels (as part of receiving the sub images of the mosaic of Figs 2, 4, and 7, the sub images are represented with different refresh rates –reduced resolution- as disclosed in Col. 1, lines 64- 67)**;**

detecting a first reduced resolution video stream corresponding to a first selected video programming channel (upon selection of channel, 302, the corresponding stream is detected);

upon detection/ selection of the channels, the corresponding reduced resolution streams are represented in a two dimensional space as shown in Fig. 7. Therefore, Oosterhout discloses a two dimensional EPG with representation of various programs as snapshots/ reduced images.

Oosterhout's EPG display is silent on:

displaying a graphical representation of a polyhedron in a first of the individual image areas;

binding the first reduced resolution video stream to a surface of the graphical representation of the polyhedron; and

displaying the first reduced resolution video stream on the surface of the graphical representation of the polyhedron in the first of the individual image areas.

However, Hashimoto discloses a channel selecting system, where channels are detected (Fig. 1), and reduced resolution version of said channels is displayed as follows:

displaying a graphical representation of a polyhedron in a first of the individual image areas (Fig. 5; Col. 6, lines 8- 57; in particular lines 50-53);

binding the first reduced resolution video stream to a surface of the graphical representation of the polyhedron (Col. 6, lines 44-50)**; and**

displaying the first reduced resolution video stream on the surface of the graphical representation of the polyhedron in the first of the individual image areas (Col. 6, lines 8- 57)**.**

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Oosterhout with Hashimoto's invention in order to enable the viewer to conveniently follow/monitor/navigate through multiple programs at the same time (as taught by Oosterhout Col. 1, lines 31-35, and Hashimoto Col.1, lines 5-9, and lines 42- 48).

5.3.1. Computer code claim 64 recites similar limitations as method claim 62, and is rejected for the same reasons as addressed.

6. Claims 52, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oosterhout in view of Hashimoto, in further view of Toklu et al., USPN 6,549,643 (hereinafter "Toklu").

6.1. Regarding claim 52, the system of Oosterhout and Hashimoto is silent on **detecting a scene change in the first reduced resolution video stream**.

However, Toklu discloses a key frame (snapshot) selection based on scene change detection (Col. 3, lines 10-16). Also see Shahraray's reference Abstract, Fig. 3 (cited by Toklu) copy of which has been made of record and provided before for applicant's convenience.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Oosterhout and Hashimoto with Toklu's invention (selecting snapshots based on scene changes in video stream) in order to select the best/ most appropriate snapshot to balance image quality with available resources (see also Toklu's abstract, 1st five lines).

6.2. Regarding claim 54, the system of the system of Oosterhout and Hashimoto is silent on **a scene change detector configured to detect a scene change in the first reduced resolution video stream**.

However, Toklu discloses a key frame (snapshot) selection based on scene change detection (Col. 3, lines 10-16). Also see Shahraray's reference Abstract,

Fig. 3 (cited by Toklu) copy of which is also made of record and provided for applicant's convenience.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Oosterhout and Hashimoto with Toklu's invention (incorporating a scene change detector to select snapshots based on scene changes in video stream) in order to select the best/ most appropriate snapshot to balance image quality with available resources (see also Toklu's abstract, 1st five lines).

7. Claims 67, and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oosterhout in view of Hashimoto, in further view of Hsieh et al., USPN 5,883,640 (hereinafter "Hsieh").

7.1. Regarding claim 67, the system of Oosterhout and Hashimoto is silent on **using a graphics accelerator** to map the reduced thumbnail videos to the side of the graphical representation of the polyhedron.

However, Hsieh discloses using graphics accelerators to implement computational intensive tasks such as rendering blits, polygons, text rasterization (Col. 1, lines 35- 46).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Oosterhout and Hashimoto with Hsieh's invention in order to improve system performance and response time.

7.2. Claim 70 is rejected by the same analysis as claim 67.

8. Claims 75, and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oosterhout in view of Hashimoto, in further view of Chen et al., USPN 6,057,884 (hereinafter "Chen").

8.1. Regarding claims 75 and 76 the system of Oosterhout and Hashimoto discloses **receiving a plurality of reduced resolution video streams** as analyzed in claim 1. The system of Oosterhout and Hashimoto is not explicit that such streams **comprise receiving an enhanced preview channel from a head-end server**.

However, Chen discloses that in addition to receiving regular programming channel, providing the viewer with **an enhanced preview channel from a head-end server** (which is received at the receiver). Fig. 7, Col. 15 line 35 through Col. 16, line 13.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Oosterhout and Hashimoto with Chen's invention in order to further provide a summary/ preview channel to keep the viewer apprised of other available programming.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES MARANDI whose telephone number is (571)270-1843. The examiner can normally be reached on 8:00 AM- 5:00 PM M-F, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571) 272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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